Application No. 10/539,562

Interview with Examiner

Agenda

- Overview of Claimed System and Method
- Differences in References

Draft Claim Amendment (temperature regulation of slides in continuous loading system)

75. (Currently Amended) An automated sample processing system for processing at least one sample on at least one carrier according to a processing protocol, comprising:

at least one removable reagent container positioned within a first plurality of drawers in a reagent section;

carrier retention devices for retaining said sample during said processing, the devices being positioned within a second ~~and a third~~ plurality of drawers in at least ~~two~~ one carrier section[[s]], ~~respectively, the at least two carrier sections being separated by the reagent section~~;

an active temperature regulation element to which said at least one sample is responsive, wherein said active temperature regulation element regulates the temperature of said at least one sample at a set point and to within a tolerance specified by the protocol; and

a moveable robotic member for dispensing fluid on the at least one carrier; wherein the at least one carrier is inserted or removed during the processing protocol without interrupting a processing of another sample movement of the robotic member.

Draft Claim Amendment (temperature regulation of reagents in drawers of continuous loading system)

102. (Currently Amended) An automated sample processing system for processing at least one sample on at least one carrier according to a processing protocol, comprising:

at least one container having a reagent therein positioned within a first plurality of drawers in a reagent section for application to said at least one sample during said processing;

carrier retention devices for retaining said sample during said processing~~, the devices being positioned within a second and a third plurality of drawers in at least two carrier sections, respectively, the at least two carrier sections being separated by the reagent section~~;

a reagent temperature control element to which said reagent in said at least one container is responsive;

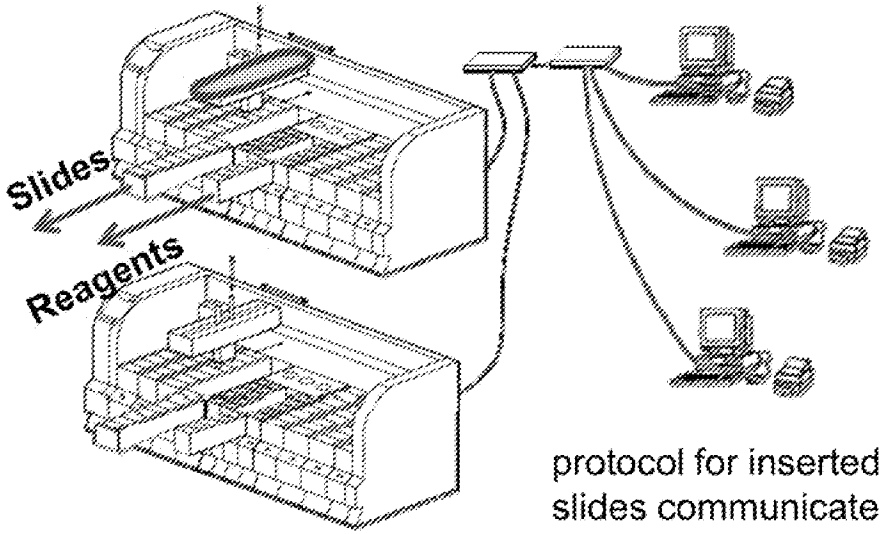
a sample temperature control element to which said at least one sample is responsive, wherein said sample temperature control element regulates the temperature of said at least one sample at a set point and to within a tolerance specified by the protocol; and

a moveable robotic member for dispensing fluid on the at least one carrier; wherein the at least one carrier is inserted or removed during the processing protocol without interrupting movement of the robotic member

Continuous Workflow Stainer Network vs. Batch Mode Systems Cited

Applicant – continuous staining network

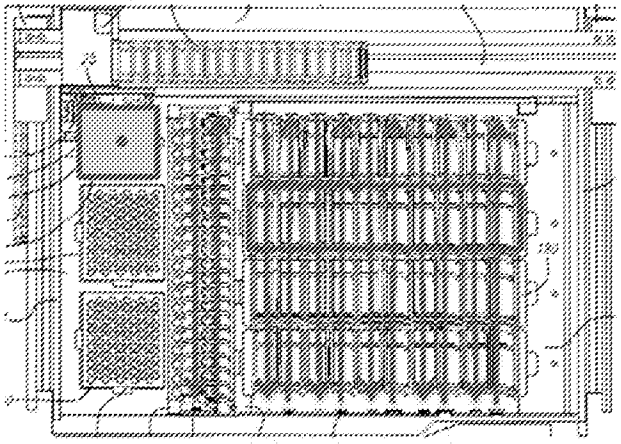
insert/remove slide racks & reagent racks while robot continues processing other racks



software monitors insert/remove while continuing to process

protocol for inserted slides communicate via network

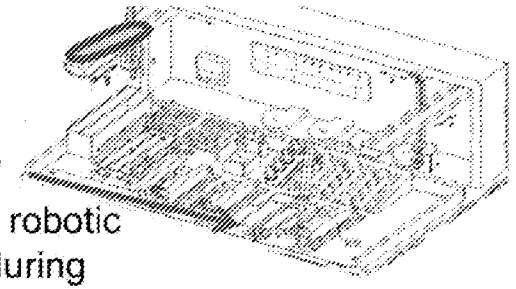
Kalra – batch staining



When users opens lid, robot stops (for safety reasons)

User can request to load stat or continuous slides wherein insertion or removal of slides/reagents necessarily interrupts ***robotic*** processing of other slides in other trays since **dispensing robot must stop moving** and **apparatus completes processing on a tray and then signals user**

Reichler – batch processing

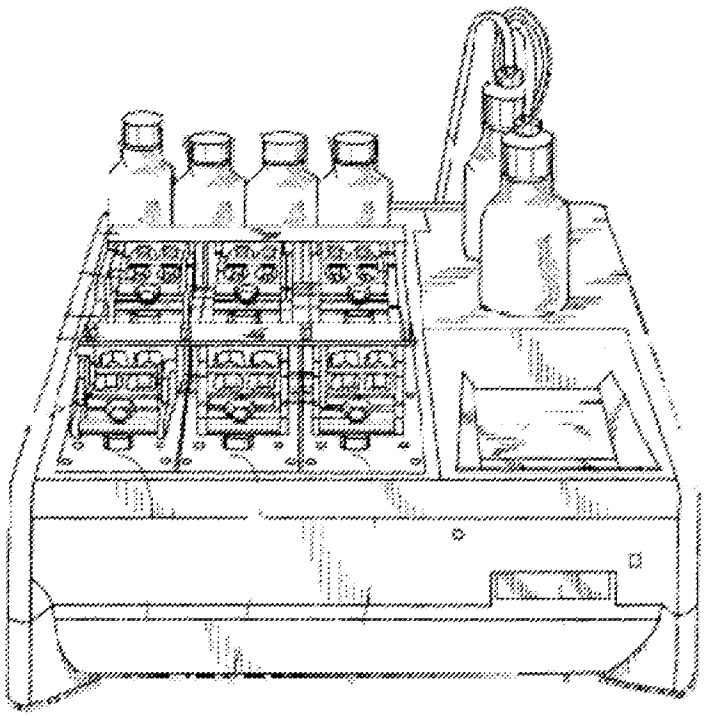


samples loaded / unloaded prior to robotic processing, not during

Batch Slide Loading – Kalra

Dispensing robot must be interrupted to load or unload

Independent fluidic manifold-based sample processing system



Custance – cited by Examiner in Office Action as primary103(a) reference

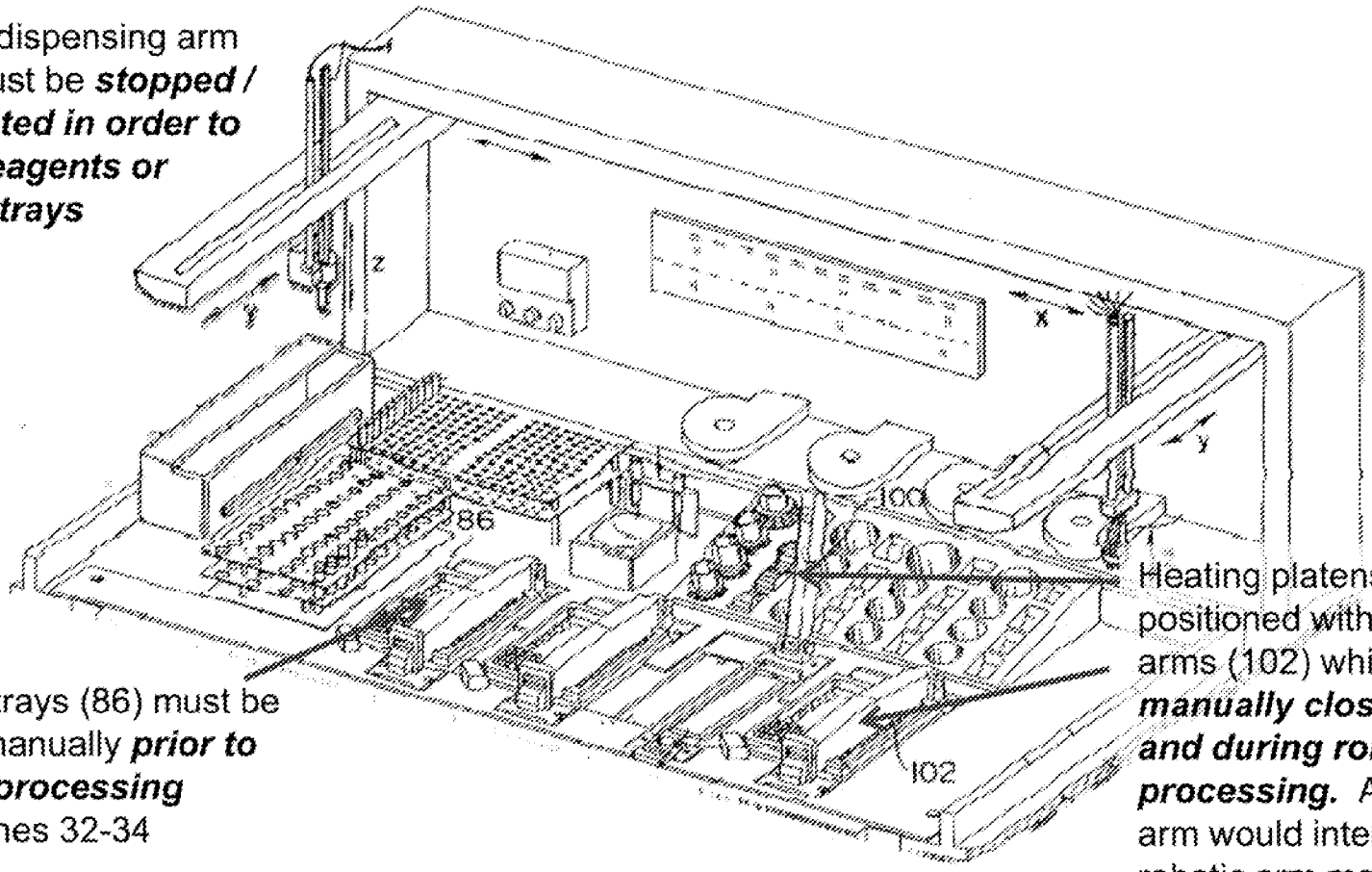
Regulates temperature of samples, but not reagents

System has no robotic dispenser nor robotic motion. Rather it is a fluidic manifold–based system not suitable loading batches of sample carriers either in historical batch mode or continuous loading batches since samples are loaded manually into processing chambers

Not combinable with system using robotic dispensing of reagents,

Batch Slide Loading – Reichler (Dispensing robot must be interrupted to load or unload reagents and slides)

Robotic dispensing arm (190) must be ***stopped / interrupted in order to insert reagents or sample trays***

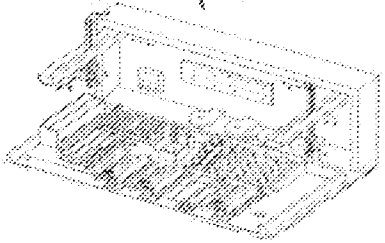


Sample trays (86) must be loaded manually ***prior to robotic processing*** col. 17 lines 32-34

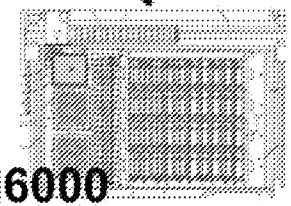
Heating platens (100) positioned within pivotable arms (102) which ***must be manually closed prior to and during robotic processing.*** An open arm would interfere with robotic arm motion.

Timeline

1995
Becton Dickinson System
"Riechler" cited in 103(a) OA
batch (not for slides)

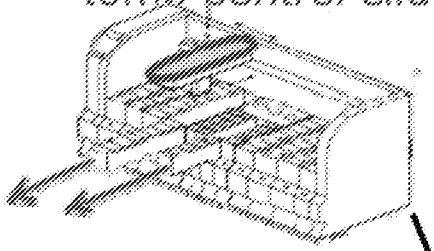


1999
Biogenex i6000
"Kalra" cited in OA
batch



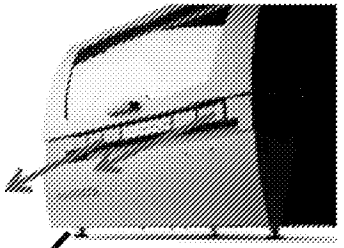
Biocare IQ Kinetic Slide Stainer
batch
no temp ctl

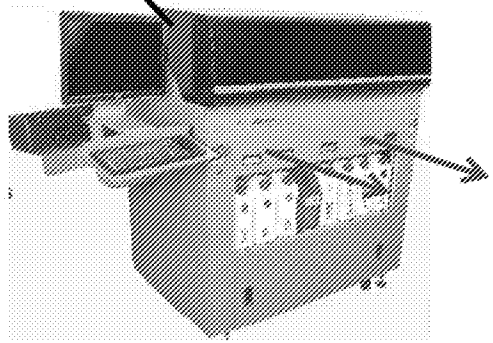
2004
Dako Eridan
continuous loading w/
temp control slides & reagents



2003
Biogenex Xmatrx
batch

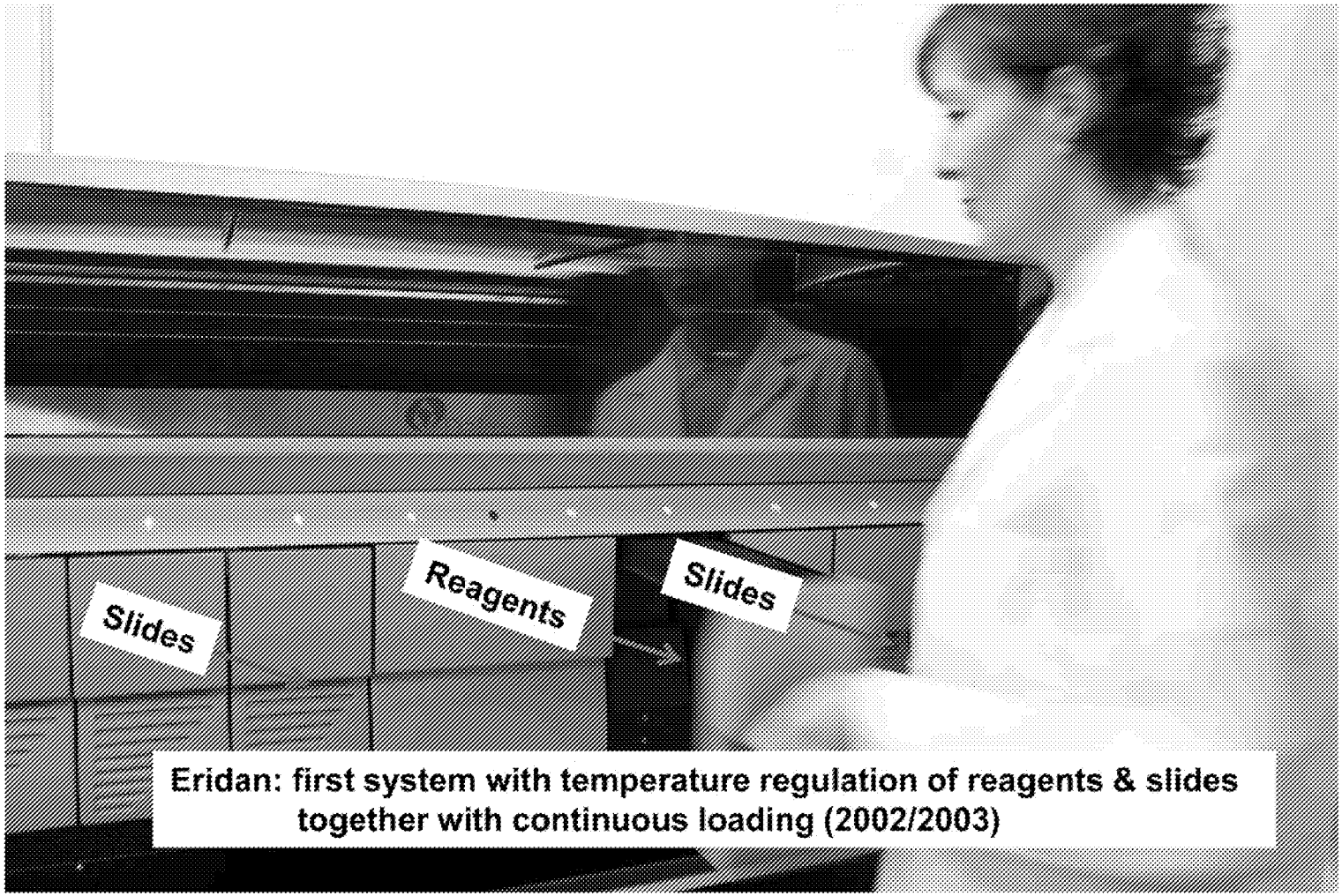
2008
Biocare Intellipath
continuous loading w/
temp control slides & reagents





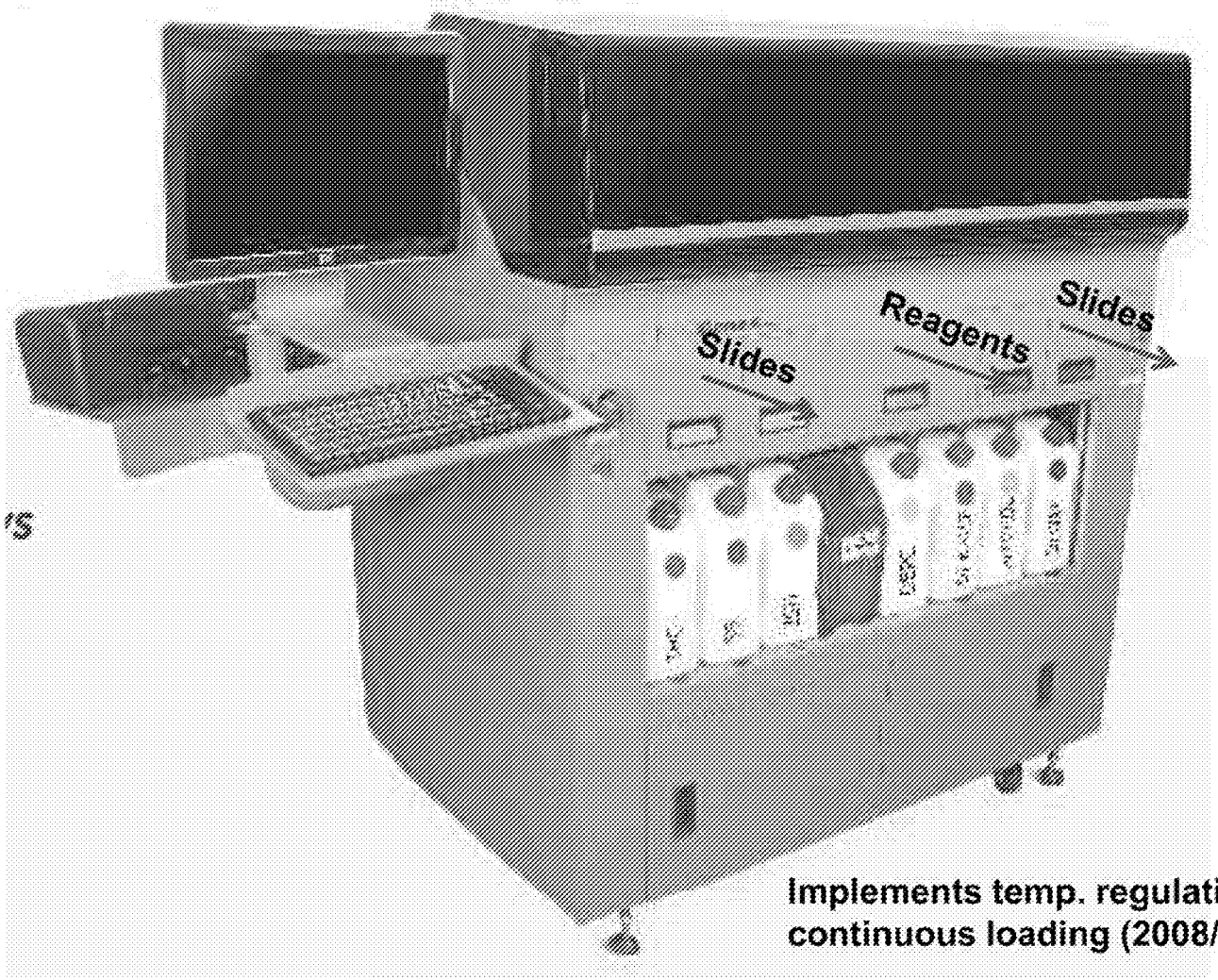
2008
Biogenex Xmatrx II
continuous loading w/
temp control slides & reagents

Dako Embodiment of the Invention (2003)



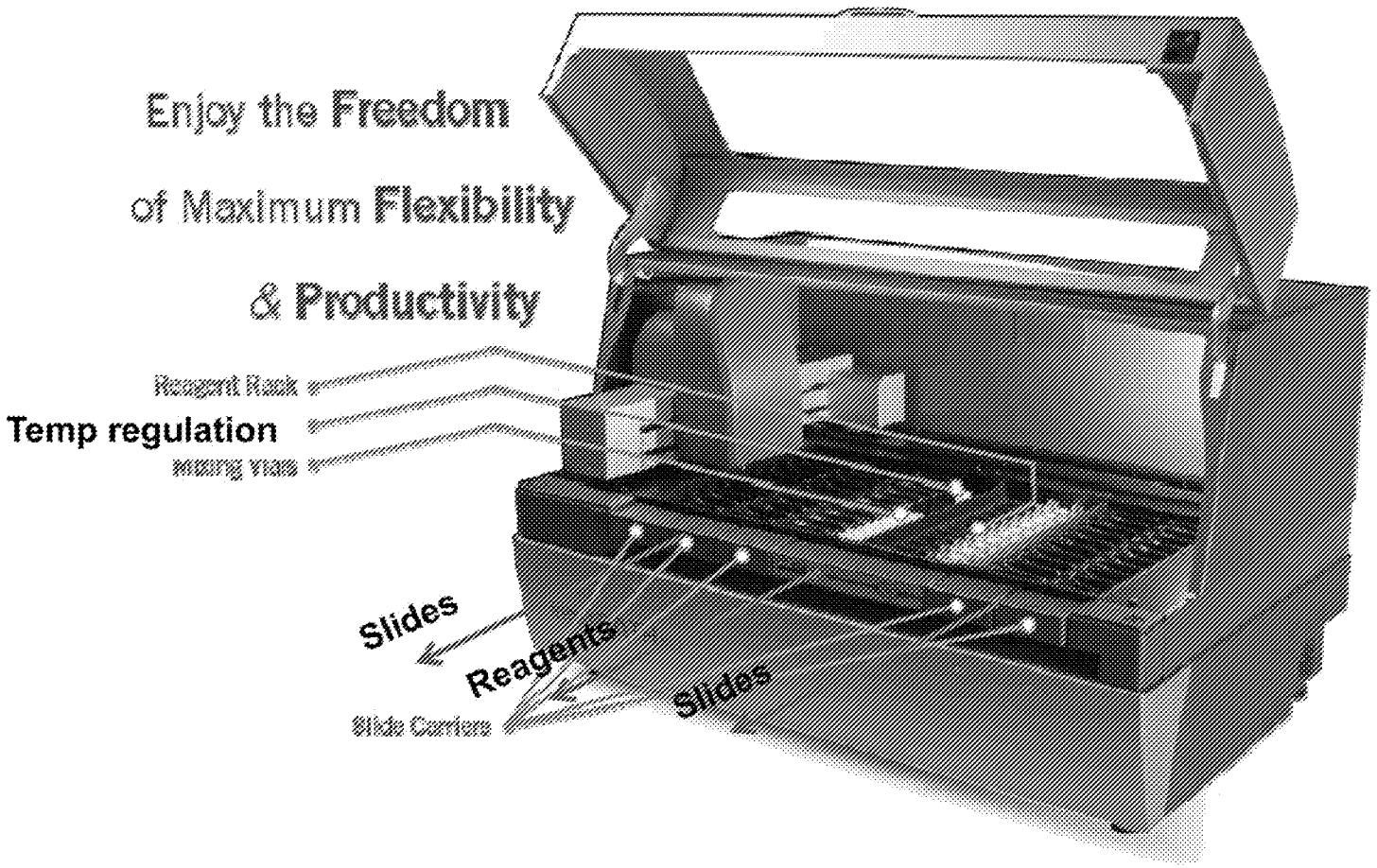
Eridan: first system with temperature regulation of reagents & slides together with continuous loading (2002/2003)

Competitors have recently implemented Dako Invention (2008/2009)



Implements temp. regulation w/ continuous loading (2008/2009)

Competitors have recently implemented Dako Invention (2008/2009)



- Flexible, fully open system
- Continuous random access workflow
- Convenience, productivity and ease of use
- High speed and throughput

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